

Intelligent System Solutions from One Supplier



 KRONES

From the Plan to the Success



For beverage manufacturing and bottling, as well as packaging an extremely wide product variety, kronos supplies complete system solutions that are individually tailored to the requirements of the customers. kronos Systems is a comprehensive base where the special competences of the individual fields are bundled. Here, innovative overall systems are designed with a holis-

tic approach and clear goals, which eventually contribute in securing the customers' competitiveness. Through an intensive co-operation with the experts from all fields, a close interlocking of technical expertise, customer-oriented planning, and economic design is created. The factory or line is seen as an overall system which shall provide utmost efficiency during its entire life cycle.

Process Procedure

Regardless if creating a new operating site on a greenfield, or if investing in an existing plant, in the beginning, there is a detailed analysis of the investment requirement. The analysis is followed by the elaboration of a comprehensive solution – from the raw material to the ramp. This modelling of the entire factory or of parts of the factory is performed by an expert team in co-operation with the customer. Because in the end it is the customer who chooses the optimal result based on the

benefit calculated by kronen – which for example is expressed in the life cycle costs (TCO). The realisation is effected with best technological know-how and in close co-operation with field-competent partners. After commissioning, individual solutions from the field Lifecycle Service secure high line outputs and thus economic success. This also goes for the IT tools, through which the processes can be planned and which document the result serving as a basis for a continuous optimisation of the production processes.

Plan	Products, Volumes, Forecast
Solution	Modelling Costs Utilisation Space Technology Operation Manpower Ergonomics Resources
Result	Installation
Success	Lifecycle Services & IT Tools



Documentation

All projects have detailed result documentation in common. Here, the following key performance indicators are determined and optimised:

- Total cost of ownership
- Return on investment
- Efficiency Rate
- Availability
- Quality

Being a systems supplier, we offer planning without any interface problems and we adjust each solution to the wishes of our customers. Several turnkey projects have already been successfully implemented where the KRONES specialist designed the future factory in co-operation with the customer. An optimal solution is only achieved, if the complex structure of operation in a factory is looked at by all participants mutually.

A Glance at the Whole





The following factors are taken into account and co-ordinated by the KRONES project team:

Technology

- Line planning under consideration of the technical know-how in the individual machine divisions
- Planning of control and buffer systems
- Automation
- Establishment of concepts for networks
- Creation and provision of an individual IT concept
- Planning and designing components for media and energy supply

Resources

- Optimum planning of material flow using simulations
- Determination of the information flow
- Overall consideration of the structure of operation
- Optimising the value-added process

Planning the Building

- Best arrangement and dimensioning of building incl. supply and disposal (energy, media, material)
- Minimum use of area via intelligent solutions
- Efficient intralogistics

Line Operation

- High line utilisation through order management
- Strategies for troubleshooting
- Optimised conversion
- Maintenance management

Degree of Utilisation

- Evaluation of production plans
- Determining availabilities, quality rates and degrees of efficiency of the total production OEE – Overall Equipment Effectiveness

Personnel

- Operation concepts and philosophies
- Training
- Planning of needed workforce

Ergonomics

- Accessibility
- Visualisation
- Operation

Costs

- Calculating the TCO – Total Cost of Ownership
- Uniform approach for the entire life cycle of the line
- Determination of the ROI (Return on Investment)



Individual Solutions



KRONES Systems offers a variety of services that are tailored to the needs of the different situations at the client's. For all solutions, the key performance indicators of the line, as well as the arising total costs are taken into account in close co-operation with the specialists from the individual departments.

Performance Packages

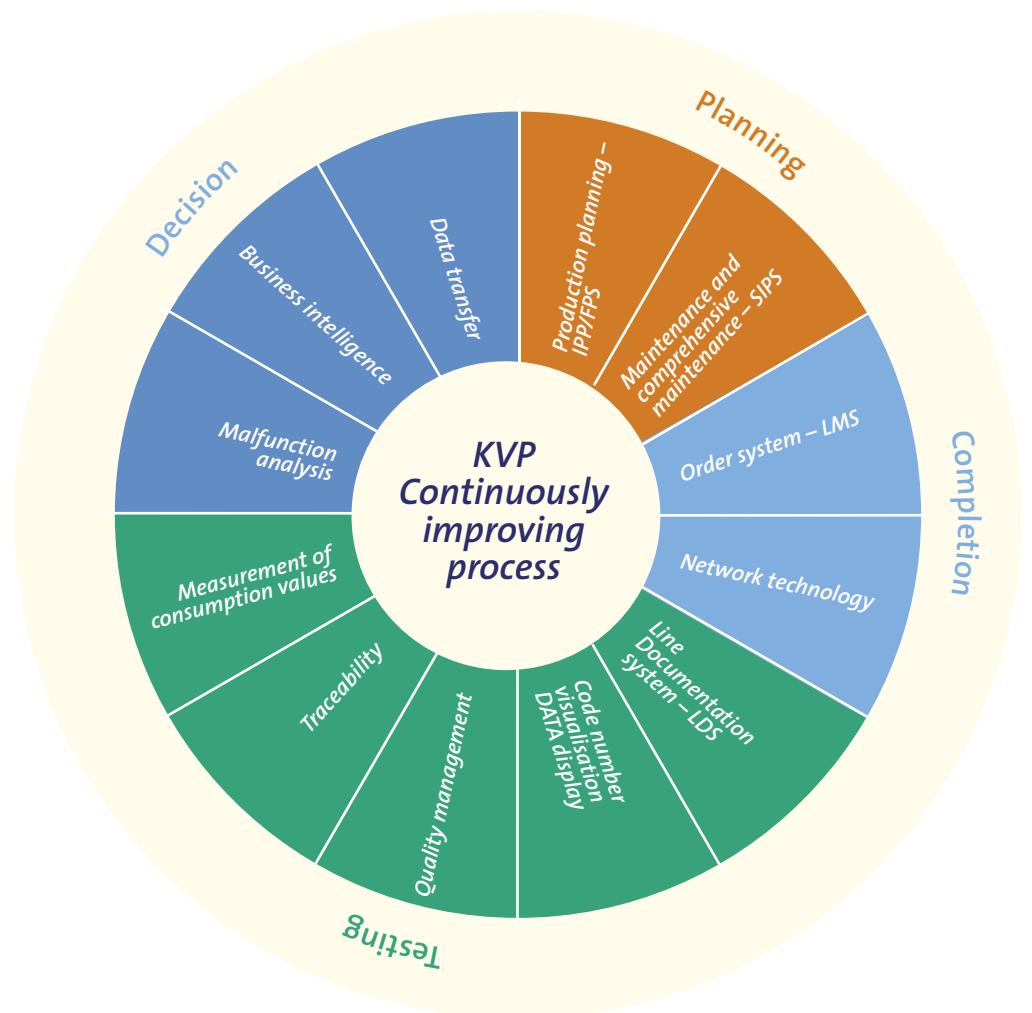
- Study of the concept
Planning and evaluating new lines
- Detailed line and factory planning
- Turnkey project
Total package – from the analysis of demand all the way to the realisation – KRONES as a general contractor
- Line tuning
Analysis and optimisation of bottling and packaging lines
- Factory tuning
Analysis and optimisation of factories
- TCO concepts
Detailed consideration of the total costs of individual machines or the entire plant



Field-Specific IT Solutions

In addition to an optimum material flow, the flow of information is gaining more and more importance in bottling plants. This is why today information technology is an integral part when the production is to be controlled efficiently.

KRONES offers their customers comprehensive consultations when it comes to integrating an overall and well-arranged IT concept as a complete MES solution into the existing IT scenario. At the daily routine in the field, the branch-specific IT tools help the user during planning, operation, documentation, analysis, optimisation, and maintenance. Again and again, these well-proven systems show that the life cycle costs of a line can be significantly lowered and the availability and performance increased by using IT products – the result of a quick return on investment.





Overall Planning Via KRONES Systems – Your Advantages:

- Sophisticated concepts acc. to detailed analysis of the requirement
- Analysis of the results regarding TCO (Total Cost of Ownership), ROI (Return on Investment) and OEE (Overall Equipment Effectiveness)
- Regarding the entire life cycle – from planning to removing the investment
- Determining and optimising the cost factors
- Central co-ordination – all services from one supplier
- Using comprehensive field expertise
- Use of highly innovative software tools (e. g. line simulation, strategic production planning)
- Documentation and realisation of the results

Worldwide Service Network

Thanks to our worldwide network of subsidiaries and sales offices, we at krones are directly on the spot worldwide. Our regional employees speak the language of the respective country and they know all national regulations and particularities. They are your first contact for all questions around your line and factory planning, and of course, they are in close contact with our experts from krones Systems. Close and reliable co-operation is very important to us with each project. Please contact us. We look forward to speaking with you.